EDITORIAL

Dear ZIP fellows, most of you entered the last six months of your research program. You started writing your papers and give oral and poster presentations at international conferences. Many of you performed the secondments and interacted with other young and senior scientists within the Network. Scientific discussion continues to increase steadily, leading you to new scientific breakthroughs on subduction processes!

After EGU 2016, a major outreach event was the European Mineralogical Congress 2016 (September 11-15, Rimini, Italy). Upcoming exciting events are the AGU 2016 Fall Meeting (December 11-16 2016, San Francisco, USA) and EGU 2017 conference (April 23-28, Vienna; Austria). Fellows and senior scientists will also meet in the last ZIP annual meeting in San Francisco (December 2016, pre-AGU), the final ZIP conference in Barcelona (April 18-21, 2017, pre-EGU). And we shall all jointly contribute to the ZIP exhibition (Paris, October 2017).

Most events are attached to major conferences in order to boost dissemination of ZIP results, to introduce fellows into the earth science community and to promote post-doctoral job opportunities.

OUTREACH AND SCIENTIFIC OUTPUT

INTERNATIONAL MEETINGS

European Mineralogical Conference (Rimini Sep 11-15)
http://emc2016.socminpet.it

The congress embraced many aspects of mineralogical, petrologic and geochemical research. Several sessions were devoted to subduction zone processes, subduction fluids and inclusions in minerals as indicators of tectonic pressures in metamorphic terrains. Sessions relevant to ZIP themes and followed by the ZIP fellows:

- **S5** The cycling of hydrogen, carbon, and mobile elements in the subduction factory.
- **S8** Diffusion, mineral reaction and deformation mechanisms from low to high temperatures: flow and brittle processes of the Earth’s interior.
- **S9** Inclusions in minerals as record of geological processes: new analysis methods and applications.
- **S11** Reading and understanding metamorphic rocks.

**EMC2016 presentations by ZIP fellows**

- **Peters D.**, John T., Scambelluri M. & Pettke T. Fluid-rock interactions in serpentinites subducted to 60-80 km depth. *Oral presentation*
- **Gilio M.**, Scambelluri M., Agostini S., Pettke T. & Godard M. Serpentinite- driven exhumation of the UHP Lago di Cignana unit in the fossil alpine plate interface. *Oral presentation*
- **Bayet L.**, Menneken M., John T., Agard P. & Gao J.: Coherent raman spectroscopy- based pt estimates to unravel the metamorphic evolution of a hp/uhp unit (Southern Tianshan metamorphic belt / SW China). *Oral presentation*

**See you in San Francisco!**
Many sessions relevant to ZIP themes are scheduled at the conference, including session “Subduction Top to Bottom”. Jointly organized by ZIP and of the E-FIRE members, the session received a large number of submissions (>135!).

**AGU presentations by the ZIP fellows**


- **Gilio M.,** Scambelluri M., Agostini S., Pettke T., Godard M. - Alpine serpentinite geochemistry as key to define timing of oceanic lithosphere accretion to the subduction plate interface. *Oral presentation*


- **Ioannidi P. I.,** Oncken O., Angiboust S., Agard P. et al. - Deformation patterns recorded by the hanging wall of a former subduction interface in the seismogenic zone (Central Alps). *Poster presentation*

- **Meneses G.,** Vigny C., Boudin F. - Short and long term analysis of upper plate deformation in Northern Chile subduction zone with GPS and tiltmeter data. *Oral*

- **Peters, D.,** John, T., Scambelluri, M. and Pettke, T. - Fluid-rock interactions recorded in serpentinites subducted to 60-80 km depth. *Poster presentation*

- **Pranger C.,** L. Le Pourhiet, D. May, Y. van Dinther, T. Gerya - Self-consistent seismic cycle simulation in a three-dimensional continuum model: methodology and examples. *Oral presentation*

- **Bayet, L.,** John, T., Agard, P., Becker, H., Gao, J. - Study of the geodynamic evolution of the Chinese Tianshan metamorphic belt to unravel deep processes occurring at the plate interface. *Poster presentation*


- **Locatelli M.,** Verlaguet A., Agard P., Federico L. - Eclogitic breccia from the Monviso meta-ophiolite complex: field and petrographic evidences of multiple-stage eclogite-facies brecciation. *Poster presentation*

**OTHER ZIP oral and POSTER PRESENTATIONS**


- **Gilio M.,** Scambelluri M., Agostini S., Godard M. - Alpine serpentinite geochemistry as key to define timing of oceanic lithosphere accretion to the subduction plate interface. *Oral Presentation* at the 4th Serpentine days 2016 (Sète, France), Session 3 – Subduction: serpentinites and beyond.


- **Peters, D. and Pettke, T.** - Evaluation of major to ultra trace element bulk rock chemical analysis of nanoparticulate pressed powder pellets by LA-ICP-MS. *Poster presentation* at the SGM 2016 Conference abstract.

- **Pranger, C.,** Y. van Dinther, L. Le Pourhiet, D. May, T. Gerya - From Tectonic to Seismic Timescales in 3D Continuum Models. *Oral presentation* (invited) at the PASC16, June 2016, Lausanne, Switzerland.

ZIP PUBLICATIONS


ARTICLES SUBMITTED/IN PREPARATION

- Gilio, M., Scambelluri, M., Agostini, S., Pettke, T., Godard, M. - Serpentinite-driven Exhumation of the UHP Lago di Cignana Unit in the Fossil Alpine Plate Interface. *In preparation.*
- Ioannidi P.I., Oncken O., Angiboust S., Agard P. et al. - Deformation patterns recorded by the hanging wall of a former subduction interface in the seismogenic zone (Central Alps). *In preparation.*
UPCOMING EVENTS

Unzipping plates at subduction zones

An international conference zooming on the subducting plate interface

Castelldefells (Barcelona) April 18-21, 2017

ORGANIZERS:

Philippe Agard - UPMC - Inst. Sciences de la Terre à Paris
Alexia Carrillo - UPMC - Inst. Sciences de la Terre à Paris
César Ranero - Barcelona-CSI, ICREA at CSIC, Institute of Marine Sciences
Valenti Sallarés - Barcelona-CSI, CSIC, Institute of Marine Sciences

In the frame of ZIP, the Spanish National Research Council (CSIC), through the Barcelona Center for Subsurface Imaging (Barcelona-CSI), and ZIP are launching this international conference on the nature plate interface and interplay of mechanical and chemical processes along it.

PROGRAMME

The conference aims at encouraging discussions on the

Nature and characterization of the plate boundary zone:

- High-resolution imaging of the plate interface
- Petrophysical properties
- Parameters controlling earthquake nucleation, rupture propagation and arrest.
- Transients and microseismicity
- Rock diversity on the subduction interface (at all relevant scales)
- Fluid/mass transfer and source contributions through space and time

Plate interface rheology through space & time: processes and feedbacks:

- Distribution of deformation along and across the plate boundary
- Linking volatile release and fluid flow with rock chemical-petrophysical changes
- Linking geodetic/geophysical with petrological/petrophysical data
- Linking mega-earthquakes generation with long-lived deformation
- Linking permanent deformation to the earthquake cycle.
- Linking post-seismic deformation with hazard after large earthquakes
- Identify feedbacks between surface processes and subduction zone dynamics

High-end numerical models:

- From earthquakes to fluid/melt transport, from the seismic cycle to long-lived deformation

Venue

The conference will be at the Congress Center of the Hotel Rey Don Jaime in Castelldefels, 15 minutes from the Barcelona international airport. This location allows easy access to Barcelona by taxi or public transportation. Be prepared for a pleasant, mild climate at this time of the year.

More information @
http://www.zip-itn.eu
http://www.iplusinnova.com/es/node/107

Conference Email: zip2017@icm.csic.es